



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1984; Directorate Identifier 2015-NM-022-AD; Amendment 39-18363; AD 2016-01-04]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2005-01-09, which applied to certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SR series airplanes. AD 2005-01-09 required a one-time detailed inspection for discrepancies of the frame web and inner chords on the forward edge frame of the number 5 main entry door cutout, and corrective action if necessary. This new AD adds repetitive high frequency eddy current (HFEC) inspections for cracking of the frame inner chords (forward and aft), and corrective action if necessary. This AD was prompted by additional cracking found in the same area after completion of the one-time detailed inspection. We are issuing this AD to detect and correct discrepancies of the frame web and inner chords, which could result in cracking, subsequent severing of the frame, and consequent rapid depressurization of the airplane.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1984.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1984; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2005-01-09, Amendment 39-13933 (70 FR 1340, January 7, 2005).

AD 2005-01-09 applied to certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SR series airplanes. The NPRM published in the Federal Register on June 24, 2015 (80 FR 36255) (“the NPRM”). The NPRM was prompted by additional cracking found in the same area after completion of the one-time detailed inspection. The NPRM proposed to continue to require a one-time detailed inspection for discrepancies of the frame web and inner chords on the forward edge frame of the number 5 main entry door cutout, and corrective action if necessary. The NPRM also proposed to require repetitive HFEC inspections for cracking of the frame inner chords (forward and aft), and corrective action if necessary. We are issuing this AD to detect and correct discrepancies of the frame web and inner chords, which could result in cracking, subsequent severing of the frame, and consequent rapid depressurization of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA’s response to each comment. United Airlines concurred with the NPRM.

Request for Credit for Accomplishing Certain Inspections Required by AD 2013-17-08, Amendment 39-17572 (78 FR 57053, September 17, 2013) (“AD 2013-17-08”)

UPS asked that credit be included in the proposed AD (80 FR 36255, June 24, 2015) for accomplishing the inspections required by AD 2013-17-08. UPS stated that paragraph (g) of the proposed AD would require accomplishing the same inspections that are required by AD 2013-17-08. UPS added that the proposed AD has a lower threshold

for accomplishing the inspections than that in AD 2013-17-08. UPS noted that Boeing confirmed that these inspections are duplicated and stated that a revision of the service information may be forthcoming to provide clarification.

We agree with the commenter that accomplishing the inspections required by AD 2013-17-08 before the effective date of this AD is acceptable for compliance with the inspections required by this AD. We had already included credit for accomplishing the inspections required by AD 2013-17-08 in paragraph (i)(2) of the proposed AD.

However, since the compliance time in AD 2013-17-08 is later than the compliance time required by this AD, we have not given credit for inspections that will be done for AD 2013-17-08 on or after the effective date of this AD. Operators may apply for approval of an AMOC in accordance with the provisions specified in paragraph (j) of this AD, by submitting data substantiating that the request would provide an acceptable level of safety. Therefore, we have made no further change to this AD.

Request to Include Terminating Action

UPS also recommended adding a sentence to paragraph (h) of the proposed AD to terminate the repetitive inspections required by AD 2013-17-08, after accomplishment of the initial inspections required by the proposed AD.

We do not agree to specify that the actions required by paragraph (h) of this AD terminate the repetitive inspections required by AD 2013-17-08, because those inspections are more extensive than the inspections in this AD. However, affected operators who wish to terminate the repetitive inspections required by AD 2013-17-08 may apply for approval of an AMOC in accordance with the provisions specified in paragraph (j) of this AD, by submitting data substantiating that the request would provide an acceptable level of safety. We have not changed this AD in this regard.

Request to Correct Typographical Error

Boeing asked that a typographical error in the “Related AD” section of the proposed AD be corrected. Boeing stated that the description of the inspection area in AD 2013-17-08 of the frame segment should be changed from “between 16 and 31” to “between 15 and 31.” Boeing noted that this is a typographical error.

We agree that there is a typographical error in the “Related AD” section of the proposed AD, as noted by the commenter. That section should specify “the frame segment between 15 and 31”; however, since that section of the preamble does not reappear in the final rule, no change to this AD is necessary in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed, with minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

We reviewed and approved Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015. The service information describes procedures for a one-time detailed inspection and repetitive surface HFEC inspections of the Station 2231 frame inner chords (forward and aft), and repair of discrepancies. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 174 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Detailed inspection	2 work-hours X \$85 per hour = \$170	\$0	\$170	\$29,580
HFEC inspections	4 work-hours X \$85 per hour = \$340	\$0	\$340 per inspection cycle	\$59,160 per inspection cycle

We have received no definitive data that will enable us to provide a cost estimate for the on-condition actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2005-01-09, Amendment 39-13933 (70 FR 1340, January 7, 2005), and adding the following new AD:

2016-01-04 The Boeing Company: Amendment 39-18363; Docket No. FAA-2015-1984; Directorate Identifier 2015-NM-022-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2005-01-09, Amendment 39-13933 (70 FR 1340, January 7, 2005) (“AD 2005-01-09”).

(c) Applicability

This AD applies to The Boeing Company Model 747-100, -100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SR series airplanes; certificated in any category; as identified in Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of additional cracking found in the same area after completion of the one-time detailed inspection. We are issuing this AD to detect and correct discrepancies of the frame web and inner chords, which could result in cracking, subsequent severing of the frame, and consequent rapid depressurization of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspections

Do the applicable actions specified in paragraphs (g)(1), (g)(2), (g)(3), and (g)(4) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015, except as required by paragraph (h)(2) of this AD.

(1) At the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015, except as required by paragraph (h)(1) of this AD: Do a detailed inspection for nicks, scratches, or gouges of the Station 2231 frame inner chords, forward and aft, at stringer 26 at the edge and side of the inner chords.

(2) At the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015, except as required by paragraph (h)(1) of this AD: Do a surface high frequency eddy current (HFEC) inspection for cracks of the frame inner chords, forward and aft.

(3) Based on the findings from the inspections specified in paragraphs (g)(1) and (g)(2) of this AD, do all applicable corrective actions, before further flight.

(4) Repeat the HFEC inspection specified in paragraph (g)(2) of this AD at the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015.

(h) Exceptions to Service Bulletin Specifications

(1) Where Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015, specifies a compliance time “after the release of Revision 1 of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015, specifies to contact Boeing for repair instructions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Credit for Previous Actions

(1) This paragraph provides credit for inspections required by paragraph (g)(1) of this AD, if those inspections were performed before the effective date of this AD using

Boeing Alert Service Bulletin 747-53A2494, dated September 18, 2003, which was incorporated by reference in AD 2005-01-09.

(2) This paragraph provides credit for inspections required by paragraphs (g)(1) and (g)(2) of this AD, if those inspections were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-53A2450, Revision 7, dated November 2, 2011, which was incorporated by reference in AD 2013-17-08, Amendment 39-17572 (78 FR 57053, September 17, 2013).

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2005-01-09 are approved as AMOCs for the corresponding provisions of paragraph (g)(1) of this AD.

(k) Related Information

For more information about this AD, contact Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 747-53A2494, Revision 1, dated January 9, 2015.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 28, 2015.

Philip Forde,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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